

novaWASH Quad LED
moving head

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1 General notes

This manual contains important instructions for the safe operation of the unit. Read and follow the safety instructions and all other instructions. Keep the manual for future reference. Make sure that it is available to all those using the device. If you sell the unit please make sure that the buyer also receives this manual.

Our products are subject to a process of continuous development. Thus, they are subject to change.

1.1 Further information

On our website (www.thomann.de) you will find lots of further information and details on the following points:

Download	This manual is also available as PDF file for you to download.
Keyword search	Use the search function in the electronic version to find the topics of interest for you quickly.
Online guides	Our online guides provide detailed information on technical basics and terms.
Personal consultation	For personal consultation please contact our technical hotline.
Service	If you have any problems with the device the customer service will gladly assist you.

1.2 Notational conventions

This manual uses the following notational conventions:

Letterings

The letterings for connectors and controls are marked by square brackets and italics.

Examples: *[VOLUME]* control, *[Mono]* button.


Displays



Texts and values displayed on the device are marked by quotation marks and italics.

Examples: *'24ch'*, *'OFF'*.

1.3 Symbols and signal words

In this section you will find an overview of the meaning of symbols and signal words that are used in this manual.

Signal word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
WARNING!	This combination of symbol and signal word indicates a possible dangerous situation that can result in death or serious injury if it is not avoided.
CAUTION!	This combination of symbol and signal word indicates a possible dangerous situation that can result in minor injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.
Warning signs	Type of danger
	Warning – high-voltage.

Warning signs	Type of danger
 A yellow triangular warning sign with a black border. Inside the triangle is a black silhouette of a person standing next to a rectangular object (a load) that is being lifted by a crane hook and cables.	Warning – suspended load.
 A yellow triangular warning sign with a black border. Inside the triangle is a large black exclamation mark.	Warning – danger zone.

2 Safety instructions

Intended use

This device is intended to be used as moving-head spotlight. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.

Sicherheit



DANGER!

Danger for children

Ensure that plastic bags, packaging, etc. are disposed of properly and are not within reach of babies and young children. Choking hazard!

Ensure that children do not detach any small parts (e.g. knobs or the like) from the unit. They could swallow the pieces and choke!

Never let children unattended use electrical devices.



DANGER!

Electric shock caused by high voltages inside

Within the device there are areas where high voltages may be present. Never remove any covers.

There are no user-serviceable parts inside.

Do not use the device if covers, protectors or optical components are missing or damaged.



DANGER!

Electric shock caused by short-circuit

Always use proper ready-made insulated mains cabling (power cord) with a protective contact plug. Do not modify the mains cable or the plug. Failure to do so could result in electric shock/death or fire. If in doubt, seek advice from a registered electrician.



WARNING!

Eye damage caused by high light intensity

Never look directly into the light source.



WARNING!

Risk of epileptic shock

Strobe lighting can trigger seizures in photosensitive epilepsy. Sensitive persons should avoid looking at strobe lights.



WARNING!

Risk of injury by falling off

Make sure that the installation complies with the standards and rules that apply in your country. Always secure the device with a secondary safety attachment, such as a safety cable or a safety chain.

The carrying capacity of the truss or other mounting must be sufficient for the intended number of devices. Note that the movement of the head may additionally stress the load-bearing structures.



CAUTION!

Risk of injury due to movements of the device

The head of the device can move quickly (pan, tilt) and can produce very bright light. This is also valid immediately after you turn on the device, when the device operates in automatic mode or under remote control and when you turn off a DMX controller that is connected to the device. Persons staying near the device could be injured or frightened.

Before you turn on the device and during the operation, always ensure that nobody stays close to the device. If work has to be performed in the area of movement or in the near vicinity of the device, it must remain turned off.



NOTICE!

Risk of fire

Do not cover the device nor any ventilation slots. Do not place the device near any direct heat source. Keep the device away from naked flames.



NOTICE!

Operating conditions

This device has been designed for indoor use only. To prevent damage, never expose the device to any liquid or moisture. Avoid direct sunlight, heavy dirt, and strong vibrations.

The device must not be moved while it is in use.



NOTICE!

Power supply

Before connecting the device, ensure that the input voltage (AC outlet) matches the voltage rating of the device and that the AC outlet is protected by a residual current circuit breaker. Failure to do so could result in damage to the device and possibly injure the user.

Unplug the device before electrical storms occur and when it is unused for long periods of time to reduce the risk of electric shock or fire.

3 Features

The moving head is especially suited for professional lighting tasks, e.g. during events, on rock music stages, in theatre and musical productions or in discotheques.

Special features of this device:

- Light source: 22 10-W four-colour Cree LEDs
- Two axes of movement:
 - Tilt (270 °)
 - Pan (540 °)
- Control via DMX (9 or 16 channels) and buttons plus display on the unit itself.
- Built-in automatic show programmes
- Master/slave mode
- Electronic dimmer
- Omega bracket and screwable eyelet for safety cable included

4 Installation

Unpack and carefully check that there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the device against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

Lift the device only at the base. When lifted at the rotatable mounting, the device may be damaged.

You can install the device standing or hanging upside down. When in use, the device must be mounted at a solid surface or clamped to an approved truss.

Work from a stable platform whenever you install or move the device or when you perform any kind of maintenance. Block access under the work area.



WARNING!

Risk of injury by falling off

Make sure that the installation complies with the standards and rules that apply in your country. Always secure the device with a secondary safety attachment, such as a safety cable or a safety chain.

The carrying capacity of the truss or other mounting must be sufficient for the intended number of devices. Note that the movement of the head may additionally stress the load-bearing structures.

**CAUTION!****Risk of injury due to movements of the device**

The head of the device can move quickly (pan, tilt) and can produce very bright light. This is also valid immediately after you turn on the device, when the device operates in automatic mode or under remote control and when you turn off a DMX controller that is connected to the device. Persons staying near the device could be injured or frightened.

Before you turn on the device and during the operation, always ensure that nobody stays close to the device. If work has to be performed in the area of movement or in the near vicinity of the device, it must remain turned off.

**NOTICE!****Risk of overheating**

Always ensure sufficient ventilation.

The ambient temperature must always be below 40 °C (104 °F).



NOTICE!

Possible damage caused by movements of the device

Always ensure that enough space is free around the device for the movements of the head (pan, tilt).



NOTICE!

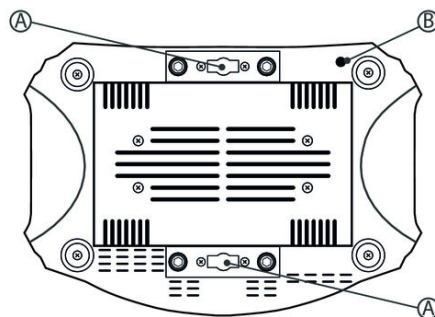
Possible data transmission errors

For error-free operation make use of dedicated DMX cables and do not use ordinary microphone cables.

Never connect the DMX input or output to audio devices such as mixers or amplifiers.

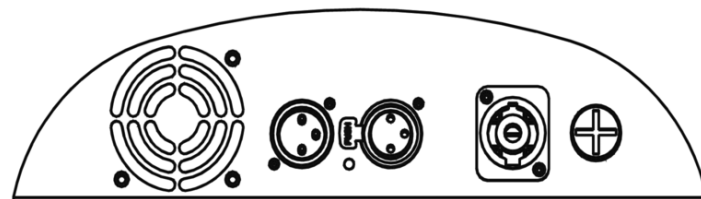
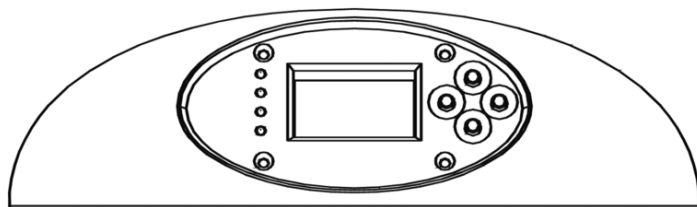
Mounting options

The quick-lock openings on the housing bottom are used for secure attachment of the included omega bracket. There, you can fasten adapters such as half couplers, trigger clamps, c-hooks etc. The thread on the housing bottom is provided for the included safety eyelet. The safety cable must be routed through this safety eyelet.



A	Quick-lock openings for omega bracket
B	Thread for safety cable eyelet

5 Connections and controls



Display

Shows the various menus and the selected functions.

LEDs

[DMX]	On	DMX signal is received
[MASTER]	On	The device operates as the 'master'.
[SLAVE]	On	The device operates as the 'slave'.
[POWER]	On	Power input present

Buttons

[MENU]	To select the programming functions
[DOWN]	To go backward in the selected functions
[UP]	To go forward in the selected functions
[ENTER]	To confirm the selected functions

Fuse

For overcurrent protection.

PowerCon input socket

Connect to supply mains power.

DMX input/output

For DMX512 link, use 3/5-pin XLR plug cable to link the unit together.

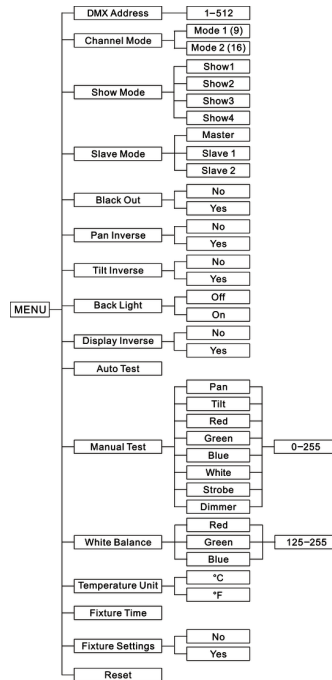
6 Operating

6.1 Main functions

To select any of the given functions, press the *[MENU]* button up to when the required one is showing up on the display. Press the *[ENTER]* button and the display will blink. Use the *[UP]* and *[DOWN]* buttons to change the mode. Once the required mode has been selected, press the *[ENTER]* button to store. To return to the main functions without any change press the *[MENU]* button or wait for one minute.

Hold the *[MENU]* button to quit the menu mode. The unit will run the built-in program you selected.

The main functions are shown below:



DMX Address

Press the *[MENU]* button up to when 'DMX Address' is showing up in the display. Press the *[ENTER]* button and the display will blink. Use the *[UP]* and *[DOWN]* buttons to change the DMX512 address. Once the address has been selected, press the *[ENTER]* button to store. To return to the main functions without any change press the *[MENU]* button or wait for one minute.

Channel Mode

Press the *[MENU]* button up to when 'Channel Mode' is showing up on the display. Press the *[ENTER]* button and the display will blink. Use the buttons *[UP]* and *[DOWN]* to select 'Mode 1 (9)' or 'Mode 2 (16)'. Once selected, press the *[ENTER]* button to store. To return to the main functions without any change press the *[MENU]* button or wait for one minute.

Show Mode

Press the *[MENU]* button up to when 'Show Mode' is showing up on the display. Press the *[ENTER]* button and the display will blink. Use the *[UP]* and *[DOWN]* buttons to select 'Show 1', 'Show 2', 'Show 3' or 'Show 4'. Once selected, press the *[ENTER]* button to store. To return to the main functions without any change press the *[MENU]* button or wait for one minute.

Slave Mode

Press the *[MENU]* button up to when 'Slave Mode' is showing up on the display. Press the *[ENTER]* button and the display will blink. Use the *[UP]* and *[DOWN]* buttons to select 'Master', 'Slave 1' or 'Slave 2'. Once selected, press the *[ENTER]* button to store. To return to the main functions without any change press the *[MENU]* button or wait for one minute.

Black Out

Press the *[MENU]* button up to when 'Black Out' is showing up on the display. Press the *[ENTER]* button and the display will blink. Use the *[UP]* and *[DOWN]* buttons to select 'Yes' (light is blacked out) or 'No' (normal operation). Once selected, press the *[ENTER]* button to store. To return to the main functions without any change press the *[MENU]* button or wait for one minute.

Pan Inverse

Press the *[MENU]* button up to when *[Pan Inverse]* is showing up on the display. Press the *[ENTER]* button and the display will blink. Use the *[UP]* and *[DOWN]* buttons to select the mode 'No' (Normal) or 'Yes' (Pan Inverse). Once selected, press the *[ENTER]* button to store. To return to the main functions without any change press the *[MENU]* button or wait for one minute.

Tilt Inverse

Press the *[MENU]* button up to when 'Tilt Inverse' is showing up on the display. Press the *[ENTER]* button and the display will blink. Use the *[UP]* and *[DOWN]* buttons to select the mode 'No' (Normal) or 'Yes' (Tilt Inverse). Once selected, press the *[ENTER]* button to store. To return to the main functions without any change press the *[MENU]* button or wait for one minute.

Back Light

Press the *[MENU]* button up to when 'Back Light' is showing up on the display. Press the *[ENTER]* button and the display will blink. Use the buttons *[UP]* and *[DOWN]* to select the mode 'On' (Back Light On) or 'Off' (Back Light Off). When 'Back Light' is 'On', the 'Auto Test' mode stops after 1 minute. Once selected, press the *[ENTER]* button to store. To return to the main functions without any change press the *[MENU]* button or wait for one minute.

Display Inverse

Press the *[MENU]* button up to when 'Display Inverse' is showing up on the display. Press the *[ENTER]* button and the display will blink. Use the *[UP]* and *[DOWN]* buttons to select the mode 'No' (Normal) or 'Yes' (Display Inverse). Once selected, press the *[ENTER]* button to store. To return to the main functions without any change press the *[MENU]* button or wait for one minute.

Auto Test

Press the *[MENU]* button up to when 'Auto Test' is showing up on the display. Press the *[ENTER]* button and the display will show 'Test...' and the unit will run a self-test. To return to the functions press the *[MENU]* button.

Manual Test

Press the [MENU] button up to when 'Manual Test' is showing up on the display. Press the [ENTER] button and 'PAN' will blink. Use the [UP] and [DOWN] buttons to select 'Tilt', 'Red', 'Green', 'Blue', 'White', 'Strobe' or 'Dimmer'. Press the [ENTER] button to enter, then press the [UP] and [DOWN] buttons to adjust the value and press the [ENTER] button to select the next option. To return to the functions press the [MENU] button.

White Balance

Press the [MENU] button up to when 'White Balance' is showing up on the display. Press the [ENTER] button and 'RED' will blink. Press the [UP] and [DOWN] buttons to adjust the value. Press the [ENTER] button to store and 'Green' will blink on the display. Press the [UP] and [DOWN] buttons to adjust the value. Press the [ENTER] button to store and 'Blue' will blink on the display. Press the [UP] and [DOWN] buttons to adjust the value, and press the [ENTER] button to store. To return to the functions press the [MENU] button.

Temperature Unit

Press the [MENU] button up to when 'Temperature Unit' is showing up on the display. Press the [ENTER] button and the display will blink. Use the [UP] and [DOWN] buttons to select '°C' or '°F'. Once selected, press the [ENTER] button to store. To return to the main functions without any change press the [MENU] button or wait for one minute.

Fixture Time

Press the *[MENU]* button up to when '*Fixture Time*' is showing up on the display. Press the *[ENTER]* button and the display will show the number of working hours of the unit. To return to the main functions without any change press the *[MENU]* button.

Fixture Settings

Press the *[MENU]* button up to when '*Fixture Time*' is showing up on the display. Press the *[ENTER]* button and the display will blink. Use the *[UP]* und *[DOWN]* buttons to select '*No*' or '*Yes*'. Use the *[Yes]* option to reset all parameters to the factory defaults. To return to the main functions without any change press the *[MENU]* button.

Reset

Press the *[MENU]* button up th when '*Reset*' is blinking on the display. Press the *[ENTER]* button and all motors will return to their home position. To return to the functions press the *[MENU]* button.

6.2 DMX512 configuration

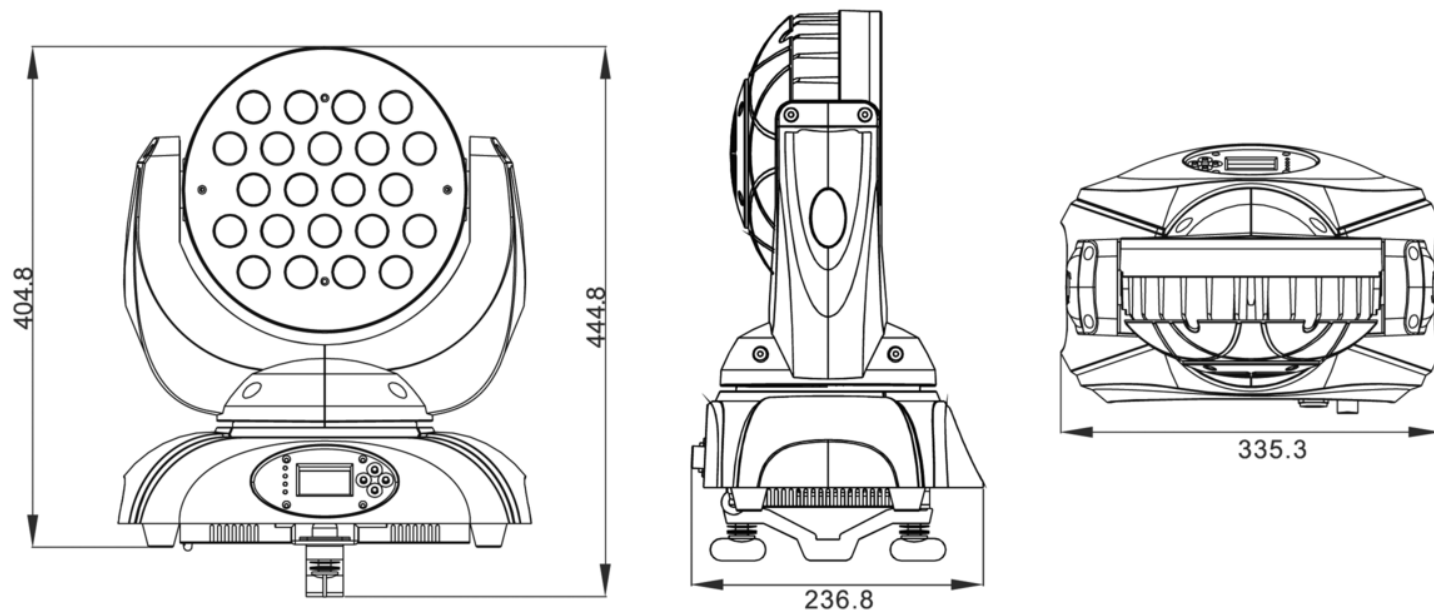
9 Channel DMX512 Configuration (Mode 1)								
Ch1	Ch2	Ch3	Ch4	Ch5	Ch6	Ch7	Ch8	Ch9
Pan	Tilt	Strobe	Red	Green	Blue	White	Dimmer	Special Function
		<p>248-255 Open</p> <p>240-247 Random Strobe</p> <p>232-239 Open</p> <p>190-231 Slow close</p> <p>182-189 Fast open</p> <p>140-181 Open</p> <p>140-181 Slow open</p> <p>132-139 fast close</p> <p>132-139 Open</p> <p>16-131 </p> <p>16-131 </p> <p>0-15 </p> <p>0-15 Open</p>						<p>240-255 Stand alone</p> <p>200-209 Reset</p> <p>80-89 Disable blackout while pan or tilt move</p> <p>70-79 Enable blackout while pan or tilt move</p>

16 Channel DMX512 Configuration(Mode2)							
Ch1	Ch2	Ch3	Ch4	Ch5	Ch6	Ch7	Ch8
Pan	Pan Fine	Tilt	Tilt Fine	Pan/Tilt Speed	Pan/Tilt Macro	Macro Speed	Special Function
<p>255 540°</p> <p>0 0°</p>	<p>255</p> <p>0</p>	<p>255 270°</p> <p>0 0°</p>	<p>255</p> <p>0</p>	<p>255 Slow</p> <p>0 Fast</p>	<p>236-255 Macro12 216-235 Macro11 196-215 Macro10 176-195 Macro 9 156-175 Macro 8 136-155 Macro 7 116-135 Macro 6 096-115 Macro 5 076-095 Macro 4 056-075 Macro 3 036-055 Macro 2 016-035 Macro 1 000-015 Stop</p>	<p>255 Slow</p> <p>0 Fast</p>	<p>240-255 Stand alone 200-209 Reset 80-89 Disable blackout while pan or tilt move 70-79 Enable blackout while pan or tilt move</p>
Ch9	Ch10	Ch11	Ch12	Ch13	Ch14	Ch15	Ch16
Dimmer	Strobe	Red	Green	Blue	White	Color	Fade Speed
<p>255 100%</p> <p>0 0%</p>	<p>248-255 Open 240-247 Random Strobe 232-239 Open 190-231 Slow close 182-189 Fast open 140-181 Slow open 132-139 Fast close 16-131 Lightning 0-15 Open</p> <p>0 0%</p>	<p>255 100%</p> <p>0 0%</p>	<p>255 100%</p> <p>0 0%</p>	<p>255 100%</p> <p>0 0%</p>	<p>255 100%</p> <p>0 0%</p>	<p>192-255 Color Fade 1-16 128-191 Color Macro 1-16 8-127 Color 1-32 0-7 Normal</p>	<p>255 Fast</p> <p>0 Slow</p>

7 Technical specifications

Through its flexible installation options the unit can be installed in various orientations. It is perfect for professional stage, theatre, TV, exhibition and architectural applications.

DMX channels	9/16 channels
Voltage	AC 100...240 V, 50/60 Hz
Power consumption	300 W
Light source:	22 × 10 W CREE quad-color LED
Fuse	5 A, slow characteristic
Beam angle	36°
Dimensions	404.8 mm × 236.8 mm × 335.3 mm (15.9 in. × 9.3 in. × 13.2 in.)
Weight	9.5 kg (20.9 lbs)



novaWASH Quad LED

8 Plug and connection assignments

Introduction

This chapter will help you select the right cables and plugs to connect your valuable equipment so that a perfect light experience is guaranteed.

Please take our tips, because especially in 'Sound & Light' caution is indicated: Even if a plug fits into a socket, the result of an incorrect connection may be a destroyed DMX controller, a short circuit or 'just' a not working light show!

DMX connections



The unit offers a 3-pin XLR socket for DMX output and a 3-pin XLR plug for DMX input. Please refer to the drawing and table below for the pin assignment of a suitable XLR plug.

Pin	Configuration
1	Ground, shielding
2	Signal inverted (DMX–, 'cold signal')
3	Signal (DMX+, 'hot signal')

9 Troubleshooting

A few common problems that may occur during operation are shown in the following. Here are some suggestions for easy troubleshooting:

The unit does not work, no light and the fan does not work

1. ➤ Check the power connection and main fuse.
2. ➤ Measure the mains voltage on the main connector.
3. ➤ Check the power-on LED.

Not responding to DMX controller

1. ➤ The DMX LED should be on. If not, check the DMX connectors and cables to see if they are properly linked.
2. ➤ If the DMX LED is on and there is no response to the channel, check the address settings and DMX polarity.

3. ➤ If you have intermittent DMX signal problems, check the pins on connectors or on the PCB of the unit or of the previous one.
4. ➤ Try to use another DMX controller.
5. ➤ Check if the DMX cables run near or run alongside high-voltage cables that may cause damage or interference to DMX interface circuit.

One of the channels is not working well

- The cable connected to the PCB may be broken.

If the procedures recommended above do not succeed, please contact our Service Center. You can find the contact information at www.thomann.de.

10 Cleaning

Optical lenses

Clean the optical lenses, that are accessible from the outside, regularly in order to optimize the light output. The frequency of cleaning depends on the operating environment: wet, smoky or particularly dirty surroundings can cause more accumulation of dirt on the optics of the device.

- Clean with a soft cloth using our lamp and lens cleaner (item no. 280122).
- Always dry the parts carefully.

Fan grids

The fan grids of the device must be cleaned on a regular basis to remove dust and dirt. Before cleaning, switch off the device and disconnect AC-powered devices from the mains. Use a lint-free damp cloth for cleaning. Never use solvents or alcohol for cleaning.

11 Protecting the environment

Disposal of the packaging material



For the transport and protective packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling.

Ensure that plastic bags, packaging, etc. are properly disposed of.

Do not just dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the notes and markings on the packaging.

Disposal of your old device



This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE). Do not dispose with your normal household waste.

Dispose of this device through an approved waste disposal firm or through your local waste facility. When discarding the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.

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MUSIC IS OUR PASSION



